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AN ASSESSMENT OF THE IMPACT OF FIRMS INNOVATIVENESS ON SOCIAL DISCLOSURE OF LISTED NON FINANCIAL COMPANIES IN NIGERIA

Isah, Baba Bida — Department of Accounting, Ibrahim Badamasi Babangida University, Lapai, Nigeria

Aliyu, Usman Baba — Department of Accounting, Ibrahim Badamasi Babangida University, Lapai, Nigeria

Sanni, Mubarak — Department of Accounting, Ibrahim Badamasi Babangida University, Lapai, Nigeria

Hassan, Ibrahim — Department of Accounting, Ibrahim Badamasi Babangida University, Lapai, Nigeria

Abstract

This study examines the effects of firm innovativeness on social disclosure. The study's data was sourced from the annual reports and accounts of Nigeria's listed non-financial enterprises, covering the period from 2011 to 2022. Using robust panel data analysis, the study applies a fixed effects and random effects model, selected based on the Hausman test and F-test of homogeneity, with corrections for heteroskedasticity through robust standard errors. The findings reveal that Firm complexity, technological infrastructure and managerial efficiency have a positive influence on social disclosure. The study recommended among others that non-financial companies in Nigeria should simplify organizational structure, invest in digital platforms, leverage data analytics, develop managerial competencies, and encourage a culture of transparency.

Keywords: Firms Innovativeness, Social Disclosure, Nigeria

1. Introduction

In today's business environment, innovation and social disclosure have become important components of a firm's strategy. Innovativeness enables companies to differentiate themselves, improve competitiveness, and achieve sustainable growth (Damanpour, 1991). On the other hand Social disclosure refers to the voluntary provision of information by companies about their social and environmental performance (Gray et al., 1995). Social disclosure is always taken seriously by the company's stakeholders since it demonstrates what the company intends to do and has done for the welfare of society (Huang et al., 2023). However, social disclosure is commonly understood to include information on a corporation's activities, aspirations, and public image in relation to environmental, community, employee, and consumer issues.

The relationship between a firm's innovativeness and social disclosure has garnered significant attention in recent years. Research has shown that innovative companies tend to disclose more social and environmental information, as they seek to demonstrate their commitment to sustainability and social responsibility (Branco & Rodrigues, 2006).

In Nigeria, the business environment is characterized by increasing competition, regulatory requirements, and stakeholder expectations. Listed non-financial companies in Nigeria operate in various sectors,

including consumer goods, industrial goods, and services. These companies face pressure to innovate and disclose their social and environmental performance to stakeholders.

Despite the growing importance of innovativeness and social disclosure, there is a paucity of research on the relationship between these two concepts in the context of listed non-financial companies in Nigeria. This study aims to fill this knowledge gap by investigating the impact of firm innovativeness on social disclosure among listed non-financial companies in Nigeria.

Previous studies have explored the relationship between innovativeness and social disclosure, but most of these studies have focused on developed economies (Branco & Rodrigues, 2006; Clarkson et al., 2008). There is a need for research that examines this relationship in the context of emerging economies, such as Nigeria.

Furthermore, existing studies have primarily focused on the manufacturing sector, with limited attention paid to other sectors (Hassan & Ibrahim, 2012). This study will contribute to the literature by examining the relationship between innovativeness and social disclosure across various sectors in Nigeria.

2. Literature Review

2.1 Empirical

Anazonwu et al., (2018) evaluated the corporate board diversity and sustainability reporting: A study of selected listed manufacturing firms in Nigeria. The study adopts a panel research design. Fixed effects panel regression analysis was used to test the hypotheses. The dependent variable sustainability reporting was measured using an Economic, Social, and Governance (ESG) index, the independent variables were board member nationality, proportion of women directors, proportion of non-executive directors, and multiple directorships. The result shows no significant positive influence of board member nationality, while proportion of women directors, proportion of non-executive directors, and multiple directorships were significant.

Additionally, Bello et al., (2021) examined the effect of Board Dynamics on Environmental, Social and Governance (ESG) Practices of Listed Non-Financial Firms in Nigeria. The study employed an ex-post-facto research design and the method of data analysis employed is the Generalized Least Square data estimation technique. The finding reveals that, independent director's industry knowledge has an insignificant positive influence on ESG practices; while board financial expertise and board magnitude have a significant positive effect on ESG practices of listed non financial firms in Nigeria.

In addition, Khan et al., (2021) investigated the role of social capital and social value creation in augmenting sustainable performance of social enterprises through moderating role of social innovation. The study used Social capital, Social value creation, social innovation, social enterprises as variables.The results confirmed that all the predictor constructs significantly elucidate the consequence constructs.

Furthermore, Ezejiofor and Emeneka (2022) investigated the leverage and social sustainability reporting on listed oil and gas firms in Nigeria. Ex-Post facto research design and content analysis method were adopted. Data were analyzed using descriptive statistics and inferential statistics such as Pearson Correlation, Panel Least Square (PLS) regression analysis and Hausman test. Findings from the empirical analysis shows that Leverage had significant effect on Social Sustainability Reporting in Nigeria.

Moreover, Abdulrasheed (2022) examined the firms' innovativeness, managerial dynamics and sustainability reporting among listed manufacturing companies in Nigeria. With Ex-post factor research design and survey research design. Data obtained was subjected to Generalized Least Square and Panel Corrected Standard Error Estimation. The study concluded that research and development and managerial efficiency are factors influencing economic, environmental and social disclosure of listed manufacturing companies in Nigeria.

A study by Alabere, Lawal, and Rabiu (2023) examined the effects of firms' innovativeness on social sustainability disclosure among selected listed Nigerian manufacturing companies. Utilizing an ex-post facto research design on a sample of 49 manufacturing

companies over a ten-year period (2011-2020), the study employed firms' technological infrastructure and complexities as proxies for innovativeness. The findings revealed that both firm complexity and technological infrastructure have significant negative influences on social sustainability disclosure.

Lastly, by investigating if sustainable development triangle (SDT) matters for business innovation in Nigeria, Salihi *et al.,* (2023) examined real earnings management in related party transactions. The study was based on the quadruple bottom line approach and for the REM, Roychowdhury model is used to identify the practices and explored panel data. The study finds a negative influence on the association of economic, environmental, social and governance (EESG) on REM in related party transactions. The study concludes that sustainable companies in the Nigerian public market are less liable to practice REM.

3. Methodology

The ex-post facto research design was used in this study. Data was collected from every non-financial company listed on the Nigeria Stock Exchange as of December 31, 2022. The unit of analysis in this study is quoted manufacturing company on the Nigerian Stock Exchange as at December 31, 2022. Sample size was calculated using formula by Krejcie and Morgan (1970). The study employed stratified random sampling techniques to determine the specific sample size for each sector. Table 1 shows the breakdown of the sampling and the sample size

Table 1: Sample Size and Sampling Technique

S/N	Sector		Population	Sample Size
1	Healthcare	9	9/75*49	6
2	Natural Resources	4	4/75*49	3
3	Construction/Real Estate	9	9/75*49	6
4	Conglomerates	7	7/75*49	4
5	Oil and Gas	13	13/75*49	8
6	Consumer Goods	21	21/75*49	14
7	Industrial Goods	13	13/75*49	8
	Total	**76**	**49**	**49**

3.1 Model Specification

The model adapted the framework proposed by Oluwatoyin *et al.* (2021), with adjustments made to fit the specific objectives and requirements of the current investigation, using Social Disclosure as the dependent variable. The modified model provides a comprehensive framework for understanding the complex interactions between a firm's innovative ambitions, managerial dynamics, and social disclosure policies. Therefore, the modified versions of the decomposed model are presented as follows:

$$SD_{it} = \beta_0 + \beta_1 FC_{it} + \beta_2 TI_{it} + \beta_3 R\&D_{it} + \beta_4 ME_{it} + \beta_5 FS_{it} + \mu_{it} \quad (1)$$

Where:

SD_{it} = Social Disclosures "i" firm and time "t"

FC_{it} = Firms Complexity "i" firm and time "t"

TI_{it} = Technological Infrastructures "i" firm and time "t"

$R\&D_{it}$ = R&D Research and Development "i" firm and time "t"

ME_{it} = managerial efficiency "i" firm and time "t"

FS_{it} = Firm Size "i" firm and time "t"

β_0 = Intercept

$\beta_1 - \beta_5$ = coefficient of slop or regression coefficient

μ_{it} = error term

The a priori expectation for this model is that all independent variables; Firm Complexity (FC), Technological Infrastructure (TI), Research and Development (R&D), Managerial Efficiency (ME), and Firm Size (FS**)** will have positive relationships with

Social Disclosures (SD). This suggests that as firm complexity increases, technological infrastructure improves, R&D efforts expand, managerial efficiency strengthens, and firm size grows, the level of social disclosures is also expected to rise. Specifically, we anticipate that $\beta_1 > 0$ (Firm Complexity), $\beta_2 > 0$ (Technological Infrastructure), $\beta_3 > 0$ (Research and Development), $\beta_4 > 0$ (Managerial Efficiency), and $\beta_5 > 0$ (Firm Size). Overall, these factors are hypothesized to positively influence social disclosures within firms.

4. Results and Discussion

Table 2 presents the descriptive outcome of the environmental disclosure and firm innovativeness indicators across non-financial companies

Table 2: Summary Analysis of the Variables Included in the Model

Variables	Obs.	Mean	Std. Dev.	Minimum	Maximum
SD	634	0.570	0.223	0	1
FC	634	2.516	0.670	1	4
TI	634	0.761	0.448	0	2
R&D	634	0.546	0.498	0	1
ME	634	1.188	1.081	0.02	12.76
FS	634	10.172	1.020	0.94	12.96

Source: Author's Computation, 2024*Explanatory Notes: SD is Social Disclosure, FC is Firms' Complexity, TI is Technological Infrastructures, R&D is Research and Development, ME is Managerial Efficiency, and FS is Firm Size*

The study presents social disclosure, which has an average value of 0.570 with a standard deviation of 0.223, which suggests that the values of social disclosure do not vary widely from the average value. The minimum value of social disclosure is 0, while the maximum value of 1.

The study proceeded to describing the indicators of firm innovativeness, starting with firm complexity, which has an average value of 2.516 with a standard deviation of 0.670, which indicates that the values of firms' complexity do not deviate from one non-financial company to another. The minimum value of firms' complexity is 1, while the maximum value of firms' complexity is 4. The study proceeded to describing technological infrastructure, which has an average value of 0.761 with a standard deviation of 0.448. This implies that technological infrastructure is relatively related across the non-financial companies. The minimum value of technological infrastructure is 0, while the maximum value of technological infrastructure is 2. Another firm innovativeness indicator that was described is research and development, with an average value of 0.546 and standard deviation of 0.498, which indicates that research and developments among the non-financial companies is closely related. The minimum value of research and development is 0, while the maximum value is 1.

4.1 Preliminary Analysis

This section shows all diagnostic tests conducted prior to the estimation of the specified models. The diagnostics test conducted include unit root test and pairwise correlation analysis.

4.2 Pair wise Correlation

One of the assumptions of the linear regression model is that there is no multicollinearity among the independent (explanatory) determinants. If correlation between explanatory determinants is high, the estimation of the regression coefficients is possible, but with large standard errors and, as a result, the population values of the coefficients cannot be estimated precisely.

Table 3: Pairwise Correlation Matrix

Variables	SD	FC	TI	R&D	ME	FS
SD	1					
FC	-0.126	1				
	(0.002)					
TI	-0.055	-0.114	1			
	(0.164)	(0.003)				
R&D	0.123	0.092	0.041	1		
	(0.002)	(0.019)	(0.307)			
ME	0.121	0.103	0.028	0.083	1	
	(0.002)	(0.009)	(0.478)	(0.037)		
FS	0.129	-0.035	0.198	-0.301	0.0239	1
	(0.001)	(0.373)	(0.000)	(0.000)	(0.548)	

Source: Author's Computation, 2024: *Explanatory Notes:, SD is Social Disclosure, FC is Firms' Complexity, TI is Technological Infrastructures, R&D is Research and Development, ME is Managerial Efficiency, and FS is Firm Size*

Table 3 reveals that social disclosure positively correlates with research and development (0.123, $p < 0.002$) and firm size (0.129, $p = 0.001$), while negatively correlating with firm complexity (-0.126, $p < 0.002$). Firm complexity is positively related to research and development (0.092, $p = 0.019$) but negatively to technological infrastructure (-0.114, $p = 0.003$). Technological infrastructure shows a positive correlation with firm size (0.198, $p < 0.000$) but is not significantly related to research and development. Additionally, research and development has a negative correlation with firm size (-0.301, $p < 0.001$). Overall, no multicollinearity issues are present, as all correlations remain below the 0.70 threshold.

Table 4: Multicollinearity Test (VIF and Tolerance)

Variables	VIF	Tolerance
Firms' Complexity (FC)	1.03	0.967
Technological Infrastructure (TI)	1.07	0.936
Research and Development (R&D)	1.13	0.884
Managerial Efficiency (ME)	1.02	0.981
Firm Size (FS)	1.16	0.863
Average VIF	1.08	

Source: Author's Computation, 2024

The multicollinearity test for the independent variables (predicators) as presented in Table 4 indicated that all the predicators had VIF less than 5. The highest was 1.16, which is firm size. Meanwhile, the tolerance in all the predicators was observed to be greater than 0.1. This therefore indicated that there was no threat of multicollinearity.

Table 5: Fisher-type Unit Root Test

Variables	P	Z	L*	Pm	Order of Integration
SD	223.7023	-9.2545	-13.0566	8.9787	I(0)
TI	269.5380	-8.6949	-13.6061	12.2527	I(0)
R&D	93.4047	-6.9142	-8.6068	-0.3282	I(1)
ME	390.5296	-10.4970	-14.3467	20.8950	I(0)
FS	336.2351	-7.4434	-9.7971	17.0168	I(0)

Source: Author's calculation (2024) using STATA 14

Table 5 confirms that all study variables are either stationary at level (I(0)) or at first difference (I(1)), making them appropriate for dynamic panel data analysis. The Fisher-type unit root test shows a mix of I(0) and I(1) variables, with none classified as I(2). Social disclosure, Firm complexity, technological infrastructure, managerial efficiency, and firm size are stationary at level (I(0)), allowing for direct regression analysis. Conversely, research and development are stationary at first difference (I(1)), requiring differencing for stationarity. Overall, the high test statistics strongly reject the null hypothesis of a unit root, reinforcing the robustness of the econometric analyses.

Table 6: Estimates of the Models on the Effect of Firm innovativeness, Managerial Dynamics on Social Disclosure (SD) with Robust Standard Error

Variable	Coefficient	T	p-value
FC	0.033	1.99	0.047
TI	0.047	2.31	0.023
R&D	0.012	0.81	0.393
ME	0.037	2.02	0.045
FS	0.007	0.97	0.339
Constant	0.392	3.25	0.001
R-squared	0.091		
Wald Chi-Squared	19.27		0.002

Source, Author's Computation (2024), *FC is Firms' Complexity, TI is Technological Infrastructures, R&D is Research and Development, ME is Managerial Efficiency, and FS is Firm Size*

Table 6 showed that R-squared value of 0.091 indicates that 9.1 percent variation in social disclosure is explained by firms' complexity, technological infrastructures, research and development, managerial efficiency, and firm size. The Wald Chi-Squared statistic value of 19.27 with associated p-valued of 0.002, suggest that it is statistically significant; hence, the random effect model is good fit.

It was revealed that firms' complexity has a statistically significant positive coefficient (0.033 with p-value of 0.047), technological infrastructure has a statistically significant positive coefficient (0.047 with p-value of 0.023), research and development have an insignificant positive coefficient (0.012 with p-value of 0.393), managerial efficiency has a statistically significant positive coefficient (0.037 with p-value of 0.045), and firm size has an insignificant positive coefficient (0.006 with p-value of 0.492). The implication of this is that firms' complexity, technological infrastructure and managerial efficiency have positive influence on social disclosure of the non-financial companies in Nigeria. On the other hand, research and development and firm size do not have significant effect on social disclosure of non-financial companies in Nigeria.

The significant positive coefficient of firms' complexity indicates that a point increase in firms' complexity will lead to increase in social disclosure of non-financial companies in Nigeria by 0.033 percent points. Furthermore, the significant positive coefficient of technological infrastructure indicates that a percent point increase in technological infrastructure will lead to increase in social disclosure of non-financial companies in Nigeria by 0.047 points. Similarly, the significant positive coefficient of managerial efficiency indicates that a point increase in managerial efficiency will bring about increase in social disclosure of non-financial companies in Nigeria by 0.037 points.

5. **Conclusions and Recommendations**

The study concludes that Firm complexity, technological infrastructure and managerial efficiency have a statistically significant positive coefficient, while research and development and firm size has an insignificant positive coefficient with the social disclosure. Based on the findings from this study, the following are recommended:

Firms with simpler structures may find it easier to implement social disclosure practices; Also, clear

communication can facilitate social disclosure and improve overall firm performance.

Additionally, implementing digital platforms can enhance social disclosure and improve stakeholder engagement. In addition, utilize data analytics to measure and report social performance, facilitating more effective social disclosure.

Moreover, provide training and development programs to enhance managerial skills and promote social disclosure. Furthermore, foster an organizational culture that values transparency, accountability, and social responsibility.

References

Abdulrasheeed, J. A. (2022). *Firms' Innovativeness, Managerial Dynamics and Sustainability Reporting Among Listed Manufacturing Companies in Nigeria* (Doctoral dissertation, Kwara State University (Nigeria)).

Anazonwu, H. O., Egbunike, F. C., & Gunardi, A. (2018). Corporate board diversity and sustainability reporting: A study of selected listed manufacturing firms in Nigeria. *Indonesian Journal of Sustainability Accounting and Management*, *2*(1), 65â-78.

Bello, M. B., Fodio, M. I., & Alhassan, A. S. (2021). Effect of Board Dynamics on Environmental, Social and Governance (ESG) Practices of Listed Non-Financial Firms in Nigeria.*Fulafia Journal of Entrepreneurial Development*, 1(1).

Branco, M. C., & Rodrigues, L. L. (2006). Corporate social responsibility and resource-based perspectives. Journal of Business Ethics, 69(2), 111-132.

Clarkson, P. M., Li, Y., & Richardson, G. D. (2008). The market valuation of environmental expenditures. Journal of Accounting and Public Policy, 27(5), 437-455.

Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. Academy of Management Journal, 34(3), 555-590.

Ezejiofor, R. A., & Emeneka, O. L. (2022). leverage and social sustainability reporting on listed oil and gas firms in Nigeria. *International Journal of Advanced Academic Research*, *8*(3), 1-14.

Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. Accounting, Auditing & Accountability Journal, 8(2), 47-77.

Hassan, M. G., Akanmu, M. D., & Yusoff, R. Z. (2018). Technological Integration and Sustainable Performance in Manufacturing Firms. *International Journal of Technology*, *9*(8), 1639. https://doi.org/10.14716/ijtech.v9i8.2747

Huang, F., Chen, M., & Liu, R. (2023). The nature of corporate social responsibility disclosure and investment efficiency: Evidence from China. *Frontiers in Environmental Science*, *11*, 117.

Khan, S. H., Yasir, M., Shah, H. A., & Majid, A. (2021). Role of social capital and social value creation in augmenting sustainable performance of social enterprises: Moderating role of social innovation. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, *15*(1), 118-137.

Salihi, A. A., Ibrahim, H., & Baharudin, D. M. (2023). Real earnings management in related party transactions: does sustainable development triangle (SDT) matters for business innovation in Nigeria?. *International Journal of Innovation Science*.